

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-019749**Date Inspected:** 14-Dec-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Qiu Wen**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Umesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

This Quality Assurance (QA) Inspector observed the following work in progress:

Bay 14

SEGMENT 13AW

Welding by FCAW process of weld joint SEG3013L-022 joining Floor Beam (FB) 3185A to Floor Beam (FB) 3186A at Panel Point (PP) 119-1500 of segment 13AW. Welder is identified as 045280. ZPMC QC is identified as Mr. Li Ping. The welding variables recorded by QC appeared to comply with WPS-B-T-2231-ESAB.

Welding by FCAW process of weld joint SEG3013J-129 joining Floor Beam (FB) 3188A to Floor Beam (FB) 3189A at Panel Point (PP) 119 of segment 13AW. Welder is identified as 045280. ZPMC QC is identified as Mr. Li Ping. The welding variables recorded by QC appeared to comply with WPS-B-T-2231-ESAB.

Welding by FCAW process of weld joint SEG3013L-095 joining Sub Assembly (SA) 3158A to Side Plate 3090B at Panel Point (PP) 119-1500 of segment 13AW. Welder is identified as 202122. ZPMC QC is identified as Mr. Li Ping. The welding variables recorded by QC appeared to comply with WPS-B-T-2232-ESAB.

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Welding by SMAW process of weld joint SEG3013Y-348, 350 joining Floor Beam to I-rib stiffener at Panel Point (PP) 119 of segment 13AW. Welder is identified as 047864. ZPMC QC is identified as Mr. Li Ping. The welding variables recorded by QC appeared to comply with WPS-B-P-2214-Tc-U4b-FCM-1.

Welding by SMAW process of weld joint SEG3013Y-356, 358 joining Floor Beam to I-rib stiffener at Panel Point (PP) 119 of segment 13AW. Welder is identified as 066361. ZPMC QC is identified as Mr. Li Ping. The welding variables recorded by QC appeared to comply with WPS-B-P-2214-Tc-U4b-FCM-1.

Welding by FCAW process of weld joint SEG3013S-090, 091 joining Bottom Plate Sub Assembly (SA) 3168A to Floor Beam (FB) 3175A at Panel Point (PP) 117.5 of segment 13AW. Welder is identified as 066236. ZPMC QC is identified as Mr. Li Ping. The welding variables recorded by QC appeared to comply with WPS-B-T-2132-ESAB.

SEGMENT 13BW

Repair welding by SMAW process of weld joint SEG3014E-107 (B-WR18607) joining I-rib stiffener to Floor Beam (FB) at Panel Point (PP) 121.5 of segment 13BW. Welder is identified as 066179. ZPMC QC is identified as Mr. Sun Tian Liang. The welding variables recorded by QC appeared to comply with WPS-345-SMAW-3G(3F)-FCM-REPAIR.

Repair welding by SMAW process of weld joint SEG3014E-116 (B-WR18610) joining I-rib stiffener to Floor Beam (FB) at Panel Point (PP) 121.5 of segment 13BW. Welder is identified as 066179. ZPMC QC is identified as Mr. Sun Tian Liang. The welding variables recorded by QC appeared to comply with WPS-345-SMAW-3G(3F)-FCM-REPAIR.

SEGMENT 13CW

Repair welding by FCAW process of weld joint SEG3014E-227 (B-WR18842) joining I-rib stiffener to Floor Beam (FB) at Panel Point (PP) 124.5 of segment 13CW. Welder is identified as 201583. ZPMC QC is identified as Mr. Sun Tian Liang. The welding variables recorded by QC appeared to comply with WPS-345-FCAW-3G(3F)-ESAB-REPAIR.

Repair welding by FCAW process of weld joint SEG3014E-235 (B-WR18845) joining I-rib stiffener to Floor Beam (FB) at Panel Point (PP) 124.5 of segment 13CW. Welder is identified as 201583. ZPMC QC is identified as Mr. Sun Tian Liang. The welding variables recorded by QC appeared to comply with WPS-345-FCAW-3G(3F)-ESAB-REPAIR.

SEGMENT 14W

During random in process inspection this QA inspector observed that ZPMC NDT personnel was performing Ultrasonic Testing (UT) on the weld joint LD3049-001-423 Joining Longitudinal Diaphragm (LD) 3049A to Longitudinal Diaphragm (LD) 3049B at Panel Point (PP) 126 of segment 14W. This weld joint was previously rejected two times by ZPMC NDT personnel and again found UT rejectable indications this time. These UT

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rejectable indications were observed clearly marked on the component. Additional photograph provide additional detail.

During random in process inspection this QA inspector observed that ZPMC personnel was performing free hand thermal cutting on the edge of web plate of floor beam (FB) 3331A at Panel point (PP) 127.5 of segment 14W. This issue has been discussed with ZPMC QC Mr. Liu Fang. Attached photograph provide additional details.

During random in process inspection this QA inspector observed ZPMC personnel were performing buttering of approx 35mm by FCAW (ESAB) process on the edge of Sub Assembly (SA) 3445 of segment 14W. Buttering was done as per Welding Repair Report B-WR18331. The material is identified as SPCM. This issue has been discussed with ZPMC CWI Mr. Qiu Wen and CT lead QA. ZPMC CWI Mr. Qiu Wen informed this QA that they will do the repair as comply to contract documents. Attached photograph provide additional details.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or

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remedial efforts please contact Eric Tsang : 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Gaikwad,Umesh	Quality Assurance Inspector
Reviewed By:	Patterson,Rodney	QA Reviewer
